



**Connecticut General Assembly  
Before the Joint Committee on Energy and Technology**

**Written Testimony of SunEdison LLC  
In Support of HB 6635 - An Act Concerning Solar Power  
Fred Zalcman, Director of Regulatory Affairs – Northeast States**

**March 10, 2009**

Senator Fonfara, Representative Nardello, and members of the Joint Energy Committee, it is a privilege to be here today testifying in support of HB 6635, "An Act Concerning Solar Power".

My name is Fred Zalcman and I am the Director of Regulatory Affairs for SunEdison, LLC, North America's leading solar energy services provider. Founded in 2003, SunEdison currently employs over 350 people in our Beltsville, Maryland headquarters facility and in our regional facilities throughout the world, including one right here in Rocky Hill. We have 6 solar installations under management in Connecticut, totaling over 1.2 Mw in capacity. Our success is built on providing a complete service to our commercial, government and utility customers without the hassle or capital outlay traditionally associated with solar solutions: we finance, design, install, operate and maintain solar generation plants at the customer's facilities. Our customers pay only for solar electricity, not solar equipment.

Let me begin by acknowledging the obvious: the state is today confronting its most serious economic and fiscal challenge our generation has known. Many initiatives, worthy of robust state support in flusher times, face dramatic cuts or elimination. Some would contend that investing in our state's solar energy future falls into this category – that as laudable as it may be to promote a shift in our energy profile to include increasing amounts of clean, renewable, locally produced and fixed price alternatives, the State of Connecticut simply cannot afford to undertake that transformation in today's economic climate.

I would commend the sponsors of HB 6635 for taking a fundamentally different perspective. Underlying this legislation is the understanding that investing in our state's solar industry is one of the best and most strategic ways to jumpstart the local economy - immediately creating high-paying, high quality jobs that can't be outsourced, and positioning Connecticut to be a major player in the burgeoning global green economy once recessionary pressures abate. HB 6635 would facilitate the immediate resumption of solar installation activity, while putting in place the building blocks for a growing, diverse and self-sustaining solar industry for the future.

Last year, the Governor and Legislature recognized the benefits of solar energy generation through legislation seeking a blueprint for the creation of a self-sustaining market for solar energy in Connecticut. Today's dire economic conditions gives new urgency to this call and, as I will discuss, underscores the potential role that solar energy development can play in the revitalization and transformation of the state's economy including near term deficit reduction.

People who have not been following the solar industry growth over the last few years may not realize that solar is no longer a cottage industry, but rather one that has begun to take its place as a serious alternative to more conventional fossil generation sources. The industry has been experiencing a 60% per year annual growth rate in the United States since 2001, with 220 Mw installed in 2007 alone. This explosive demand growth has precipitated an influx of significant new investment in solar companies; the U.S. Department of Energy reports that solar companies raised over \$1 billion in venture capital in 2007.<sup>i</sup> This private investment has enabled the industry to exploit economies of scale, accelerate technology development and bring new and better products to market faster. The result has been dramatic declines in the installed cost of solar energy, with the result that solar could be competitive with grid supply in many markets, including the Northeast, in five to seven years time.

Solar energy is unparalleled in its ability to generate good high-paying jobs to get the Connecticut economy moving once again. Distributed solar generates more jobs per megawatt-hour than any other generation technology. Moreover, a recent study by Barclay's Capital Research confirms that over 75% of all jobs connected with the solar industry are for system installation<sup>ii</sup>, an inherently local endeavor. Further, solar energy

promotes a balanced workforce – creating high end jobs in research and development, manufacturing and design and engineering, but also creating a legion of workers needing no more than a high school education or vocational training. Of our 350 employees at SunEdison, a healthy majority are permanent installers out in the field.

Further, solar PV is the quintessential shovel ready industry. Unlike conventional generating plants (or even utility scale renewables) that require years of design, permitting and construction, distributed solar can be installed in area homes, businesses and public buildings in a matter of weeks.

Despite a weakening economy, demand for solar PV remains remarkably strong. This is underscored by the lengthy waiting list of residential and commercial customers who have lined up for solar rebates through the Clean Energy Fund. Consumers understand that their investment in PV pays immediate, long-term and virtually risk-free returns in the form of reduced energy bills.

States throughout the country - many in the Northeast region - are starting to step up to the challenge. The solar industry is developing rapidly in New Jersey as the state moves towards its goal of 1700 Mw of installed capacity by 2020. Other neighboring states, notably Massachusetts and New York, have announced ambitious plans for solar development and are steadily adding solar energy to their overall resource mix. Even states with an historic affinity to the fossil fuels industry, such as Pennsylvania and Ohio, are joining the growing ranks of states committing time and treasure to significant solar deployment.

These public investments have had a profound effect on the cost of solar electricity. It is important to note that while solar module costs are driven by global demand, the costs for the balance of system and installation, which represent over 50% of the total installed cost, are much more influenced by local market conditions and state policy. A just-released report from the Lawrence Berkeley National Labs documents the steady decline in the installed cost of solar energy, and the role of state programs in accelerating this trend. According to the LBL study:

Available evidence confirms that PV costs have declined substantially over time... primarily as a result of reductions in non-module costs. This trend, along with the narrowing of cost distributions over time, suggests that PV deployment policies have achieved some success in fostering

competition within the industry and in spurring improvements in the cost structure and efficiency of the delivery infrastructure. Moreover, the fact that states with the largest PV markets also appear to have somewhat lower average costs than most states with smaller markets lends further credence to the premise that state and utility PV deployment policies can affect local costs.<sup>iii</sup>

Unfortunately, Connecticut's solar program has been both too small and too erratic to support the long-term development of a homegrown solar industry. Strong demand for customer-sited solar has prematurely sapped the Connecticut Clean Energy Fund of its already limited resources until June 2010 at the earliest, leaving customers who are seeking refuge from escalating energy prices frustrated and the local solar industry looking across Connecticut's borders for a lifeline. This perpetual cycle of "boom and bust" is antithetical to the development of a healthy, growing and vibrant solar market. What is required instead is a public-private partnership between the state and the solar industry: Solar companies like SunEdison are prepared to make the major investment in people, facilities and inventory needed to drive the Connecticut solar market, but this will only occur if public policy is directed to achieving long-term market visibility, stability and scale.

HB 6635 would correct this situation by setting ambitious but achievable solar deployment targets for the State through 2020, and by putting in motion a comprehensive and innovative set of solar policies and programs that reflect best practices in solar program design. Upon enactment, HB 6635 will immediately enable homeowners, businesses and communities to resume investment in this stable-priced, clean and renewable energy alternative, while at the same time addressing important energy policy objectives - the creation of green jobs, local grid congestion relief, long-term energy cost reduction and electricity price stabilization, improved air quality and enhanced energy security for the State. Moreover, HB 6635 would achieve these far-reaching and profound benefits at a monthly household cost that is less than the price of a cup of coffee – a worthy investment in even these turbulent economic times.

In order to reach the 370 MW base goal, HB 6635 would implement a comprehensive program for reaching all segments of the market, from residential to large power plant sized systems. The program is structured in a way that allows all

segments to participate, but encourages competition as a way to deliver the benefits of solar electricity at the lowest possible cost to ratepayers. Moreover, the program effectively harnesses the capabilities and resources of various market participants - including the CCEF, existing state agencies, independent project developers and capital providers, and utilities -- to deliver on ambitious goals.

We do have one major concern with the legislation as currently drafted. One possible interpretation of Section 4 is that *all* incremental development of PV, whether customer-sited or grid supply, be open to acquisition by distribution utilities as rate based assets. The General Assembly should refrain from taking this extreme approach. Promoting utility-owned solar PV to the exclusion of other ownership models is detrimental to future development of the industry. This situation would eliminate any possibility of competition and reduce supplier interest in the market. Competition among ownership models, providers, installers, etc. is essential to meet the State's goals for renewable energy production and will result in lower costs over the long-term.

In order to support the General Assembly's stated goal of establishing a self-sustaining solar industry in Connecticut, a wide range of ownership structures should be encouraged. To that end, SunEdison supports easing current restrictions on utility ownership of generation assets to allow, under the parameters described below, utility rate basing of solar PV within its service territory. Such allowance should be carefully structured to maximize both competition and innovation in the solar PV industry and thereby maximize the use of solar energy. The General Assembly must take care that its policies do not, by design or practical effect, limit ownership of PV systems in specific market segments to a particular entity or market participant.

Consistent with Connecticut's long-standing support for competition in the generation sector, SunEdison suggests that utility ownership of solar assets be limited to 33% of their total requirement for large-scale grid connected solar energy pursuant to Section 8.

Our section-by-section analysis of the bill and recommendations for change are appended to my testimony.

In conclusion, SunEdison strongly supports HB 6635 and we welcome the opportunity to work with this Committee, the members of the General Assembly, and the Governor towards its ultimate passage and enactment into law.

Dated: March 10, 2009  
Hartford, Connecticut

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<sup>i</sup> United States Department of Energy, *Solar Energy Industry Forecast: Perspectives on U.S. Solar Market Trajectory*, May 2008.

<sup>ii</sup> Barclay's Capital Solar Energy Daily, October 17, 2008.

<sup>iii</sup> Wiser, Ryan et.al., *Tracking the Sun: The Installed Cost of Photovoltaics in the United States from 1998-2007*, (Lawrence Berkeley National Laboratory, February 2009).

## **GO SOLAR! CONNECTICUT**

### **ANALYSIS OF RAISED BILL NO. 6635 BEFORE THE CONNECTICUT GENERAL ASSEMBLY COMMITTEE ON ENERGY AND TECHNOLOGY**

**FRED ZALCMAN  
SUNEDISON LLC**

**MARCH 10, 2009**

#### **I. Introduction**

Last year, the Governor and Legislature recognized the benefits of solar energy generation through legislation seeking a blueprint for the creation of a self-sustaining market for solar energy in Connecticut. Today's dire economic conditions gives new urgency to this call and underscores the potential role that solar energy development can play in the revitalization and transformation of the state's economy including near term deficit reduction. HB 6635 ("An Act Concerning Solar Power") acts on this promise - establishing the cornerstones of a vibrant solar market in Connecticut, and bringing numerous benefits to the citizens of the State including the economic development associated with the creation of quality jobs, local grid congestion relief, long term energy cost reduction and electricity price stabilization, improved air quality and enhanced energy security for the State.

In order to preserve and expand the benefits of solar energy in Connecticut, there is an immediate need to restore short-term incentives. The solar incentives offered through the Renewable Energy Investment Fund have been prematurely exhausted due to pent-up consumer demand for this clean, stable-priced and renewable option, and the state is seeing the steady exodus of its nascent, homegrown solar industry to neighboring states with more stable, secure and significant programs. Homeowners, businesses, and local governments who "want to do the right thing" are frustrated when they learn that state incentives no longer exist. Replenishing funding for solar project development will support the continued development of industry infrastructure, increases in certain in-State solar manufacturing, and near term development of high-wage, high-skilled installation jobs that cannot be exported to other states and regions. With incentives back in place, the industry can continue to move toward a position of grid parity where the prices of locally produced solar energy will be closer to and eventually even with those of fossil electricity supplied through the grid.

In addition, HB 6635 augments this short term goal with a longer range, more aggressive goal that recognizes the potential size of the market and the ability of Connecticut to be a national leader in providing clean, locally produced solar electricity. Establishing such a goal and a program to support its success will draw the solar industry to the state and encourage companies to establish dealer networks, launch comprehensive educational and marketing campaigns, and hire the engineers and other technical talent necessary to build a vibrant and self-sustaining market.

## II. HB 6635's Solar Deployment Goals and Jobs Creation Potential

HB 6635 is designed to reach a goal of 370 MW of solar generating capacity by 2020. According to Connecticut Siting Council projections, the goal of 370 MW will meet from 4.5% to 5.0% of the state's peak demand in the terminal year of the program (with the range depending upon the success of parallel energy efficiency initiatives). Annual incremental targets would likewise be established to support the sustained and orderly development of the solar industry. These targets balance the need for immediate economic stimulus with industry capability and cost.

### *New Clean Energy Systems*

All told, the program will support, at a minimum:

- **10,000** residential-scale solar systems;
- **350** systems for small to mid-size businesses (average size of 100kw);
- **75** rooftop solar systems at larger commercial and industrial sites (average size of 200kw);
- **1000** solar systems at governmental facilities owned or managed by the State;
- **35-50** "community solar" farms bringing the benefits of solar energy to local governments, multi-family affordable housing units, and non-profit entities (size ranging from 700kw – 1MW); and
- **10** utility-scale systems connected directly to the grid (average size of 5 MW).

### *Jobs*

As a distributed resource, solar generates more jobs per megawatt-hour (Mwh) than any other energy technology. These are high-skilled, high-paying jobs throughout the PV value chain, including wafer, cell and module manufacturers, integrators of cells into systems, power electronics manufacturers, distributors, designers and system installers. According to the Renewable Energy Policy Project,<sup>1</sup> each million dollars invested in installed solar capacity supports over 17 direct jobs. With the large-scale, long-term

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<sup>1</sup> Renewable Energy Policy Project, *The Work That Goes into Renewable Energy* (2001) (5.65 person-years of employment per \$1 million invested).



incentive program embodied in HB 6635, the state can expect to capture a portion of the manufacturing jobs (that tend to be located in close proximity to major markets) and virtually all of the permanent construction jobs. Moreover, given the multiplier effect, additional jobs are created in industries that support the solar industry. All told, HB 6635's 370 MW solar goal will translate to an expected:

- **8,400** Local jobs (selective manufacturing, installation, maintenance, etc.); and
- **80,000** Indirect jobs (structural engineers, food & catering, rentals, etc.)

### **III. Program Description**

In order to reach the 370 MW base goal, HB 6635 consists a comprehensive program for reaching all segments of the market, from residential to large power plant sized systems. The program is structured in a way that allows all segments to participate, but encourages competition as a way to deliver the benefits of solar electricity at the lowest possible cost to ratepayers. Moreover, the legislation would effectively harness the capabilities and resources of various market participants - including the REIF, existing state agencies, independent project developers and capital providers, and utilities – to deliver on ambitious goals.

HB 6635 is comprised of the following elements and minimum deployment targets:

- Single family residential solar - 35 MW
- Large customer-sited solar (non-residential up to 2MW) – 150 MW
- Mid-size customer-sited solar (non-residential up to 50kw) – 35 MW
- State governmental facilities – 100 MW
- Utility-scale free-standing solar - 50 MW

Within these segments, HB 6635 authorizes the development of “community solar” facilities through an expansion of Connecticut’s net metering regime to enable customers to offset consumption through election to participate in centralized solar facilities located off-site. As described more fully below, we anticipate that of the 370MW of new solar development the following will be configured as community solar facilities:

- Low income multi-family residential – 15 MW
- Municipalities and other units of local government– 30 MW
- Non-profit religious, educational and charitable organizations – 15 MW

These market segments are described in more detail in the section-by-section analysis below.

## *Sections 1 and 2. Single Family Residential Market*

Minimum Goal: 35 MW

Section Overview: This section represents a continuation and expansion of the current REIF Small Solar program, with certain modifications to support more extensive and cost-effective delivery. This program element is designed to address the “first cost” barrier to solar deployment by households through a combination of rebates and facilitated lease arrangements. For households who wish to own their own system, rebates levels would be set to “buy-down” the capital cost of the system to reach acceptable payback levels. Alternatively, REIF’s innovative solar lease program would continue to be offered as a means of providing homeowners the opportunity to deploy solar and enjoy immediate bill savings with no capital outlay but funds between this and the buy-down program should be fully fungible to serve the markets that develop.

Unlike the current REIF program, however, the new residential program would have a fixed, long-term budget with incentives declining over time according to a known schedule and price reductions. As blocks are filled, incentive levels automatically adjust downward (and are eventually eliminated). This avoids the boom/bust cycles that have plagued the REIF program to date – if rebate levels are too high the “step” is rapidly consumed, and prices automatically adjust downward; if rebate levels are too low, the “step” remains at its current level until such time as solar costs come down and the incentive is adequate to support project development.

Agencies involved: REIF would administer the rebate and lease programs. The first three steps of the long-term schedule of declining incentives would be established in law, with subsequent steps established in the next REIF Comprehensive Plan. A presumption would be that the previously approved schedule would continue absent a material an unanticipated change in solar system costs.

Utility role: Continue to collect public benefit surcharge.

Funding source: Repurposing of existing surcharge for solar energy initiatives

## *Sections 3 and 4. Non-Residential Market (Up to 2MW)*

Minimum Goal: 185 MW

Section Overview: Under this program component, Connecticut’s electric distribution companies would competitively procure solar renewable energy credits (SRECs) and/or energy over the life of the program from solar resources harvested from solar panels placed on Connecticut’s commercial, industrial, public and non-profit rooftops. A greater emphasis on the large-system solar market is essential to achieving economies of scale in deployment and to accelerating reductions in the costs of installed capacity. The non-residential small system market for small commercial, industrial, non-profit and governmental applications would be supported in much the same way as the large system market; namely, through long-term SREC contracts with the distribution utility. One key difference, however, is that small commercial project developers would be eligible for a standard offer 15-year contract. The price of the standard offer would be indexed to the highest bid price of the projects selected in the most recent large

commercial market solicitation (including a modest adder based on the relative economics of small systems). This addresses the small to mid-sized integrators need for long-term price certainty to attract financing, without having to participate in an auction process geared for larger projects. At the same time, because the standard offer is the result of a competitive solicitation it imposes additional market discipline on developers. Bids would be selected primarily on the basis of price, although other non-price factors (e.g., resource reliability, viability, in-service date, economic development benefits, etc.) may be established by DPUC regulation in connection with the Clean Energy Fund's Comprehensive Plan. Separate solicitations would be conducted for systems above and below 200kW to assure market diversity. Winning bidders would receive long-term SREC (and, at the utility's option, energy) contracts (minimum 15 years) with the distribution utility, enabling such projects to obtain private financing. SREC's secured through this competitive solicitation shall be retired by the distribution utility to meet their RPS obligations, but would in all other respects be a separate program. The DPUC will review the selection process similarly to the way in which they currently review Project 150 applications.

Involved agencies: DPUC develops regulations governing solicitation process with first auctions by January 2010 and DPUC certification of results by July 2010.

Utility role: Utilities would conduct regular auction process and select winning bids in conjunction with REIF who would aid in technical review and upper level project management functions. Utilities would enter into long-term contracts with solar developers.

Funding source: Utility rates

## *Sections 5 and 6. State Government Facilities*

Goal: Minimum of 100 MW

Section Overview: HB 6635 requires the Department of Public Works, in consultation with the Renewable Energy Investment to develop and issue Request(s) for Proposals for solar generation installed at facilities owned or managed by the State of Connecticut as needed. The REIF will hire a technical consultant to pre-screen and rank projects for technical viability (orientation, structural loading, shading, roof quality, etc.).

The program will be structured to ensure that, from day one, state, local governments and state grantees experience electricity price discounts off their standard tariffs that will result in state government deficit reduction. The benefits of lower electricity bills extend to all citizens of the state in the form of reduced cost of government services eliminating the need for raising taxes or curtailing services. Further, the RFP(s) may be structured to encourage a third party ownership arrangement wherein the upfront capital cost of the system and performance risk would be borne by the project developer (rather than the State) with the State agreeing only to purchase the output of the solar system under a 20-year power purchase agreement. In addition to shifting project risk, this model will also enable the state to leverage the 30% Federal Investment Tax Credit (or cash grants in lieu of tax credits provided under the American Recovery and Reinvestment Act) otherwise unavailable to solar system owners with no federal tax obligation.

Involved agencies: REIF, DPW

Utility role: None

Funding source and estimated cost: General Obligation Bonds

## *Section 7. Community Solar*

Minimum Goal: None specified

Section Overview: HB 6635 would authorize the development of “community solar” projects serving low-income residential, non-profit, or local municipal governments. Under community solar, a number of disparately located electricity consumers or a single consumer with multiple sites/meter locations can take advantage of the energy generated by a centralized solar energy facility connected directly to the grid or located behind a customer meter.

Under the community solar framework, an entity such as the Renewable Energy Investment Fund would make available project grants for community solar projects serving low income residential consumers. Consumers enrolling in community solar projects would receive the full retail offset of their proportional interest in the community solar facility. We envision such consumers buying blocks of community solar energy in 100 kWh increments at a rate set to provide a discount off their otherwise applicable electric rate. The utility would credit the participant for the retail value of this block on their monthly bill with full carryover of unused credits (“virtual net metering”). Similarly, local governments could access grants administered by an entity such as REIF. These community solar facilities could be sized beyond the needs of the on-site load with excess production credited to the government entity’s other metered load and

with provisions to reduce their state grants in other areas by a commensurate amount or percentage thereof. For example:

- A municipality has a large tract of unusable land (e.g., at a landfill or waste transfer station) or under-utilized piece of property (e.g., a municipal parking lot) that would be an ideal location for a large ground-mounted solar system. However, the electrical load at the site is minimal. Community solar would enable the municipality the opportunity to use the excess solar generation to offset load at other municipal sites, saving the taxpayers significant sums and easing pressure on municipal budgets to cover rapidly rising electricity costs.
- A community college has ample roof space on a new dormitory that can support a solar system sized far in excess of what is needed to supply the dorm with electricity, particularly in the summer months when students are on recess. Community solar would enable the college to take advantage of this excess generation to offset load at the college's administrative offices located across town.
- A church has an open field on which it would like to place a solar installation. The church would encourage the congregants to "subscribe" to the solar farm as part of the church's "environmental stewardship" teachings. Or multiple congregations could pool resources and create one solar installation on their best site and each individual house of worship would benefit by locking in part of their electricity bills.

Adoption and implementation of the community solar concept will address a number of technical and economic barriers to customer-sited deployment of solar energy (cost, lack of access to sunlight, high transaction costs and lack of scale) and enable the greatest number of Connecticut ratepayers to take advantage of solar energy at the lowest possible cost. Community solar will significantly expand Connecticut's addressable solar market, making this clean and renewable resource available to more homes and public institutions. Individual customers can obtain a fractional interest in the output from a central solar facility. These participants can benefit from solar without any capital outlay and irrespective of their own site characteristics. It also takes advantages of the inherent cost savings and efficiencies associated with a single large-scale centralized plant.

Involved agencies: REIF would have responsibility for administering the grants for solar systems serving affordable housing and non-profit clients. REIF would be the central administrator of loan funds directed to local government projects. The DPUC would need to establish billing practices, including eligibility requirements for participation in community solar facilities, and potentially licensing requirements for community solar developers. The DPUC would also determine whether and to what extent utilities would be entitled to cost recovery on lost margins.

Utility role: Utilities would be responsible for assigning bill credits to designated community solar participants.

Funding sources: There would not be a special source of funding reserved for community solar facilities; rather, funding for purposes of buying down the upfront capital cost of community solar facilities would be based on the applicable market

segment the facility was intended to serve (e.g., residential, small customer-sited, large customer-sited, etc.).

#### *Section 8. Utility-Scale Freestanding Solar Facilities (2-20MW)*

Goal: 50 MW

Section Overview: HB 6635 would authorize a production incentive to jump start grid-connected solar development in Connecticut and provide an immediate boost in jobs and related economic development activity. This program component would target emerging opportunities for large-scale, ground-mounted solar installations (often located in under-utilized space such as brownfields, excess utility property at power plants and substations, or industrial parks). These large-scale solar projects would feed directly into Connecticut's distribution grid, providing Connecticut electricity consumers with the benefits of stable priced, environmentally superior solar energy. Connecticut's solar resource is particularly well synced up with peak daily and seasonal demand, mitigating reliability concerns, while offsetting peak energy, capacity and federally-mandated congestion charges.

Under this initiative, the cost of up to 50MW of grid-tied solar would be subsidized through the payment of a production incentive. Solar project developers would bid their required production (per kWh) subsidy, with payments made over a 20 year period based on actual output. Developers would have to meet stringent project milestones in order to preserve their right to incentives, with completion required within 2 years of selection.

Within the last two years, there has been a proliferation of multi-MW solar projects undertaken by investor owned utilities and third party developers across the U.S. This development has been sparked by technology innovations and cost reductions, and fueled by the extension of federal investment tax benefits. Unfortunately, despite having some of the highest electricity rates in the country, and a program dedicated to fostering utility-scale renewable development (Project 150), no such development is occurring in the Nutmeg State. The main deficiency with Project 150 is that incentives do not recognize and monetize the full benefits of solar energy and are therefore insufficient to spur development. Legislation would promote large-scale solar development in Connecticut by modifying and customizing the Project 150 Initiative to meet the financial requirements of large-scale solar projects, while maximizing leverage of private sector investment.

Involved agencies: REIF

Utility role: Utilities enter into long-term contracts with project developers as per Project 150 (i.e., at Statutory Price Cap or wholesale price). Utilities or their affiliated subsidiaries would also be able to participate in the program by strategically locating large-scale solar development in areas of the distribution network needing support.

Funding sources and estimated costs. Utility base rates

## IV. Suggested Amendments to HB 6635

### A. Limitations on Utility Ownership

In order to support the General Assembly's stated goal of establishing a self-sustaining solar industry in Connecticut, a wide range of ownership structures should be encouraged. To that end, SunEdison supports easing current restrictions on utility ownership of generation assets to allow, under the parameters described below, utility rate basing of solar PV within its service territory. Such allowance should be carefully structured to maximize both competition and innovation in the solar PV industry and thereby maximize the use of solar energy. The General Assembly must take care that its policies do not, by design or practical effect, limit ownership of PV systems in specific market segments to a particular entity or market participant.

One possible interpretation of HB 6635 is that *all* incremental development of PV, whether customer-sited or grid supply, be open to acquisition by distribution utilities as rate based assets. The General Assembly should refrain from taking this extreme approach. Promoting utility-owned solar PV to the exclusion of other ownership models is detrimental to future development of the industry. This situation would eliminate any possibility of competition and reduce supplier interest in the market. Competition among ownership models, providers, installers, etc. is essential to meet the State's goals for renewable energy production and will result in lower costs over the long-term. Consistent with Connecticut's long-standing support for competition in the generation sector, SunEdison suggests that utility ownership of solar assets be limited to 35% of their total requirement for large-scale grid connected solar energy pursuant to Section 8.

We propose the following amendment to HB 6635:

Sec. 4 (NEW) (*Effective from passage*)...

(c) Each electric distribution company shall execute its approved solicitation plan and submit for Department review and approval its preferred solar procurement plan (hereinafter "solar procurement plan") comprised of any proposed contract or contracts with independent solar developers or utility affiliates, ~~and where applicable, utility proposals to develop solar projects as a rate based investment.~~ If applicable, the independent auditor shall conduct an audit of the electric distribution company's bid solicitation and evaluation process to ensure that it comports with the standards set forth in subsection (k). For purposes of such audit, the electric distribution company shall provide the independent auditor immediate and continuing access to all documents and data reviewed, used or produced by the electric distribution company in its bid solicitation and evaluation process. The electric distribution company shall make all its personnel, agents, and contractors used in the bid solicitation and evaluation available for interview by the auditor. The electric distribution company shall conduct any additional

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modeling requested by the independent auditor to test the assumptions and results of the bid evaluation process. Within 60 days of the electric distribution company's selection of solar resources, the independent auditor shall file a report with the Department containing the auditor's findings, with any deficiencies specifically reported.

(d) The department shall hold a hearing that shall be conducted as a contested case, in accordance with the provisions of chapter 54 of the general statutes, to approve, reject or modify an application for approval of the electric distribution company's solar procurement plan. The department shall only approve such plan if it finds that 1) the solicitation and evaluation conducted by the electric distribution company was the result of a fair, open, competitive and transparent process, 2) approval of the solar procurement plan would result in the lowest reasonable cost of solar energy or solar renewable energy credits, and 3) such procurement plan satisfies other criteria established in the approved solicitation plan. ~~Where the electric distribution company has proposed to develop and rate-base customer-sited solar facilities, the department shall additionally determine that such investment will not restrict competition or restrict growth in the state's solar energy industry or unfairly employ in a manner which would restrict competition in the market for solar energy systems any financial, marketing, distributing, or generating advantage that the electric distribution company may exercise as a result of its authority to operate as a public service company.~~ The department may, at its discretion, retain the services of an independent auditor with expertise in the area of energy procurement. The independent auditor shall be unaffiliated with the electric distribution company or its affiliates and shall not, directly or indirectly, have benefited from employment or contracts with the electric distribution company or its affiliates in the preceding five years except as an independent auditor. The independent auditor shall not participate in or advise the electric distribution company with respect to any decisions in the bid solicitation or bid evaluation process. The department's administrative costs in reviewing the electric distribution company's solar procurement plan shall be recovered in rates.